

FIG. 1A

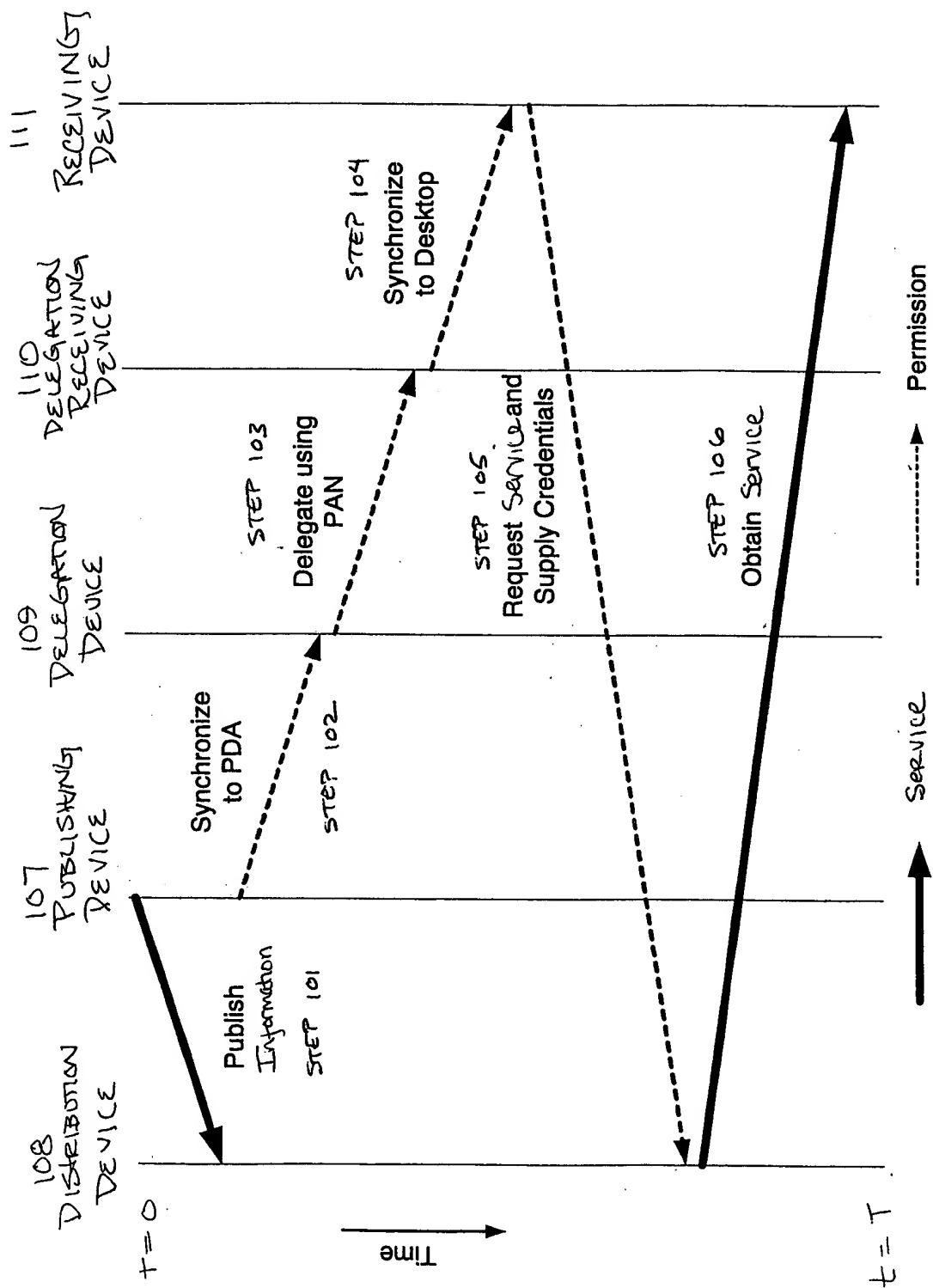
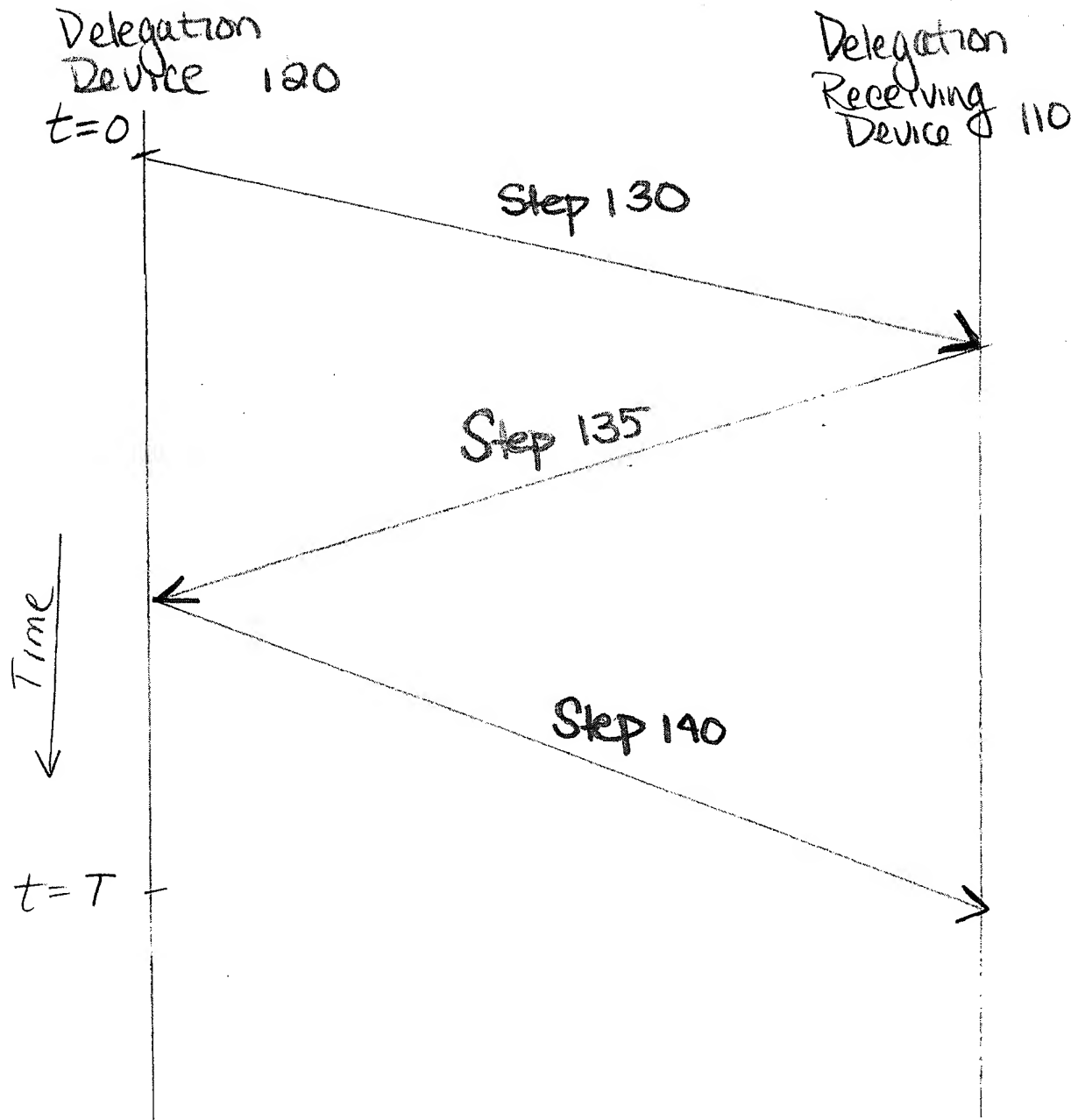


FIG. 1B



Data Structure Definitions in ASN.1

```
permissionChain ::= SEQUENCE OF permissionLink

permissionLink ::= SEQUENCE {
    permissionLinkComponent permissionLinkComponent,
    Signature OCTET STRING
}

permissionLinkComponent ::= SEQUENCE {
    Name OCTET STRING,
    Uri OCTET STRING,
    Description OCTET STRING,
    Note OCTET STRING,
    Version INTEGER,
    Src_p INTEGER,
    Src_q INTEGER,
    Src_g INTEGER,
    Src_pub INTEGER,
    Src_x509cert OCTET STRING,
    Src_email OCTET STRING,
    Subj_p INTEGER,
    Subj_q INTEGER,
    Subj_g INTEGER,
    Subj_pub INTEGER,
    Subj_x509cert OCTET STRING,
    Subj_email OCTET STRING,
    Delegate BOOLEAN,
    Read BOOLEAN,
    Write BOOLEAN,
    validFrom GeneralizedTime,
    validTo GeneralizedTime
}
```

FIG. 1C

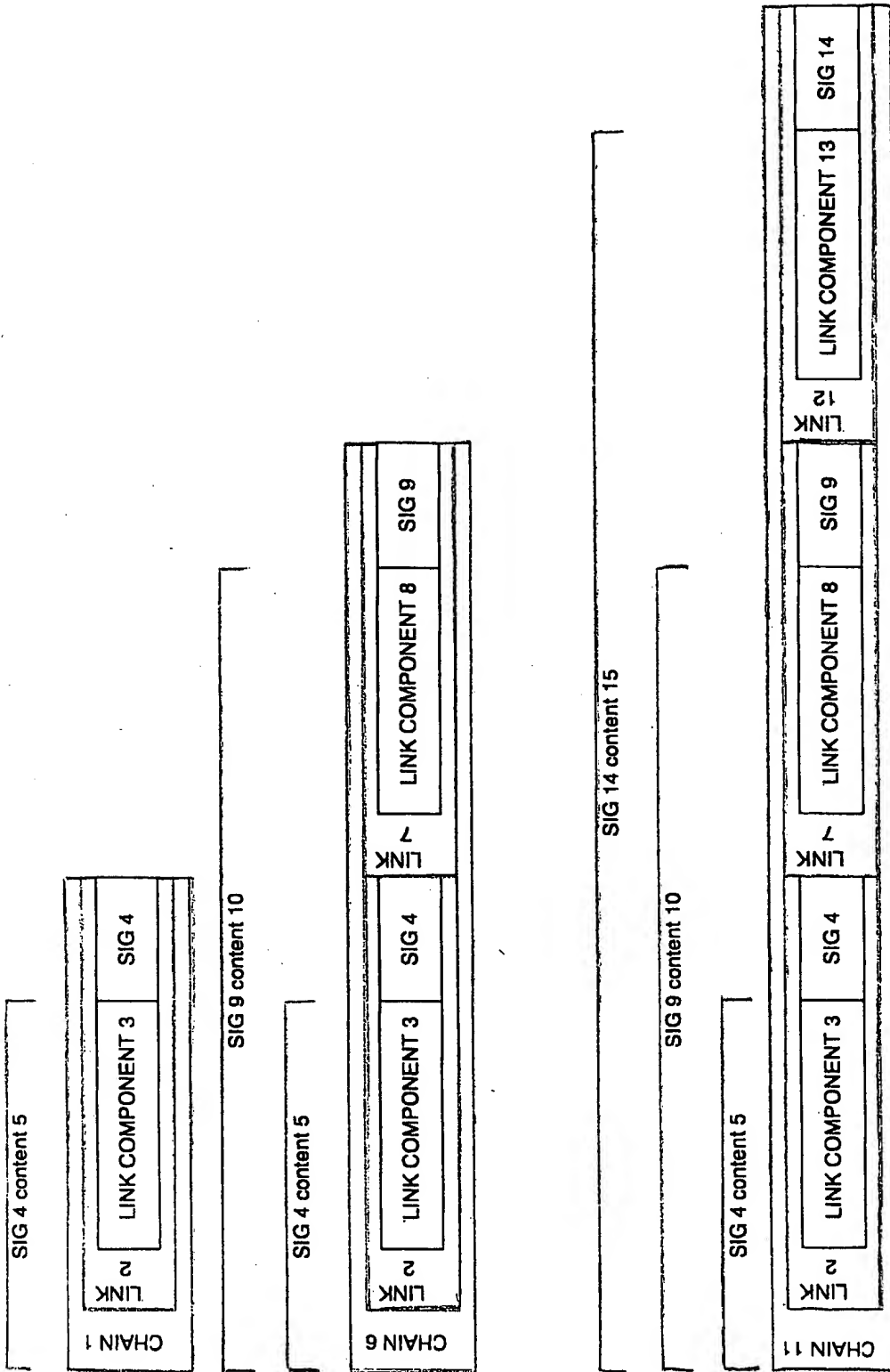


FIG. 1D

# System Overview

FIG. 2A

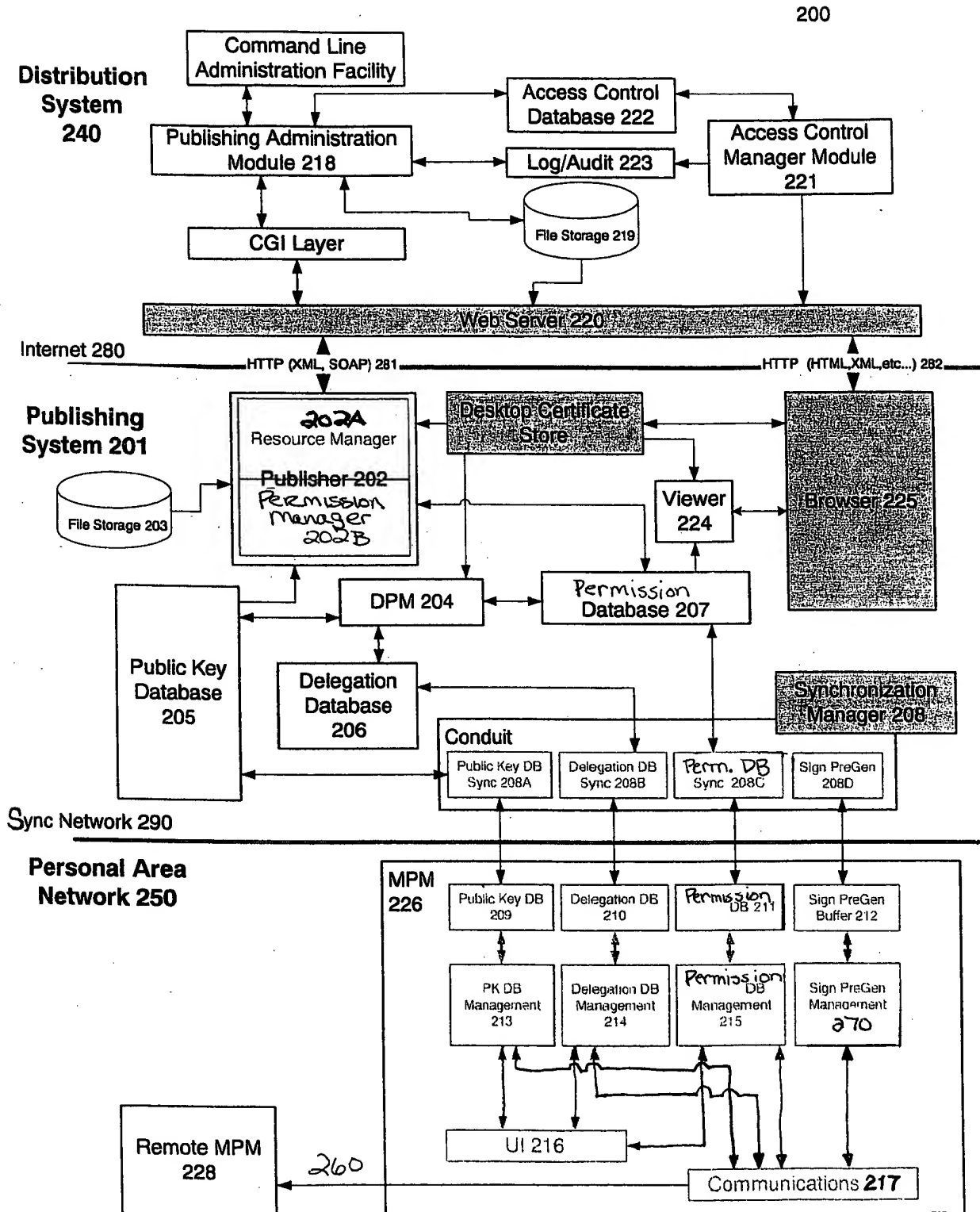


FIG. 2B

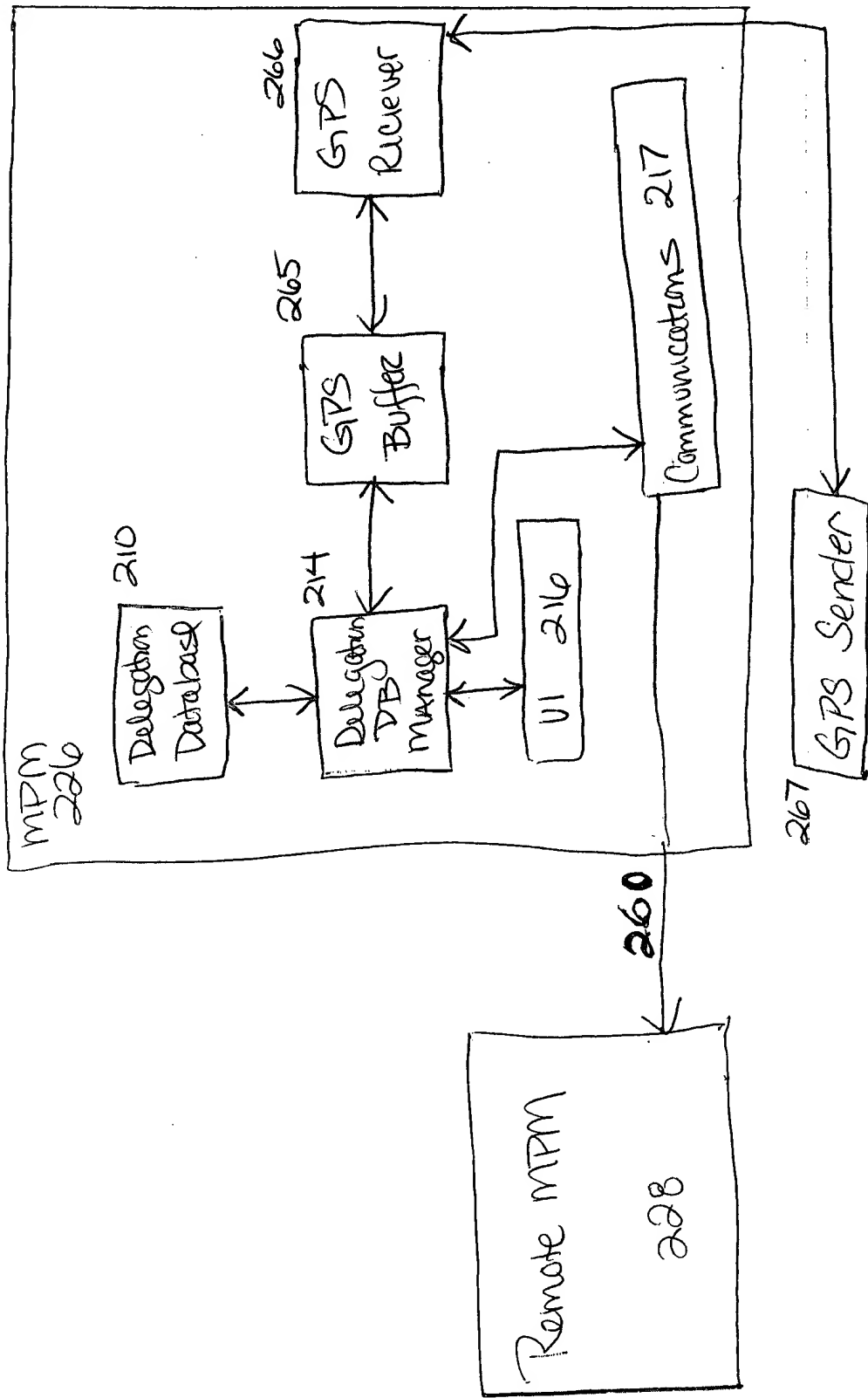
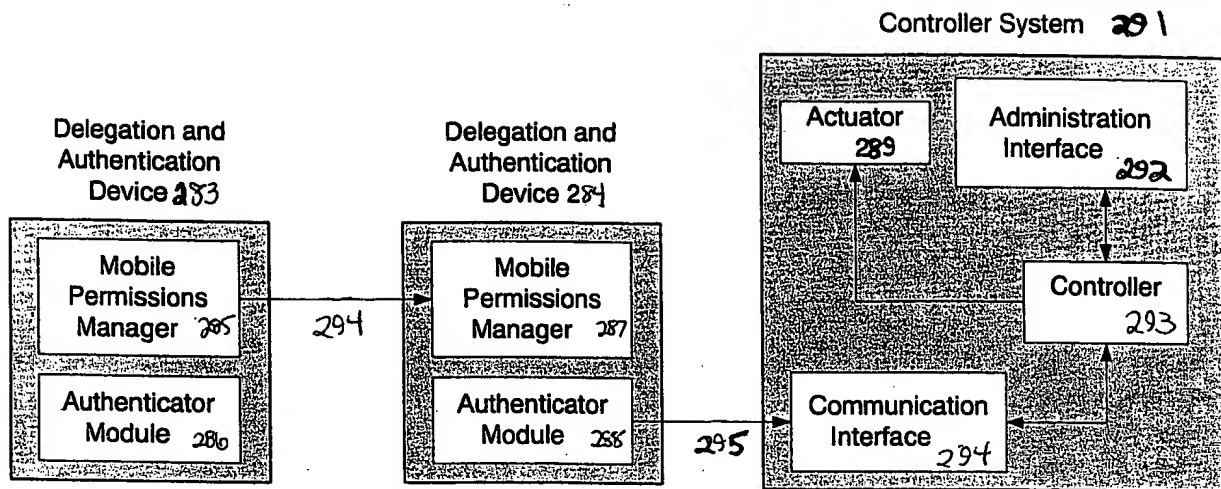


FIG. 2C



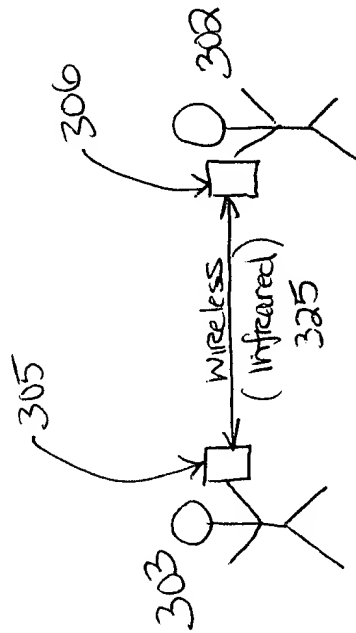
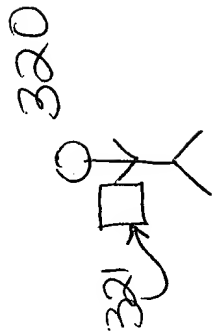


FIG. 3A

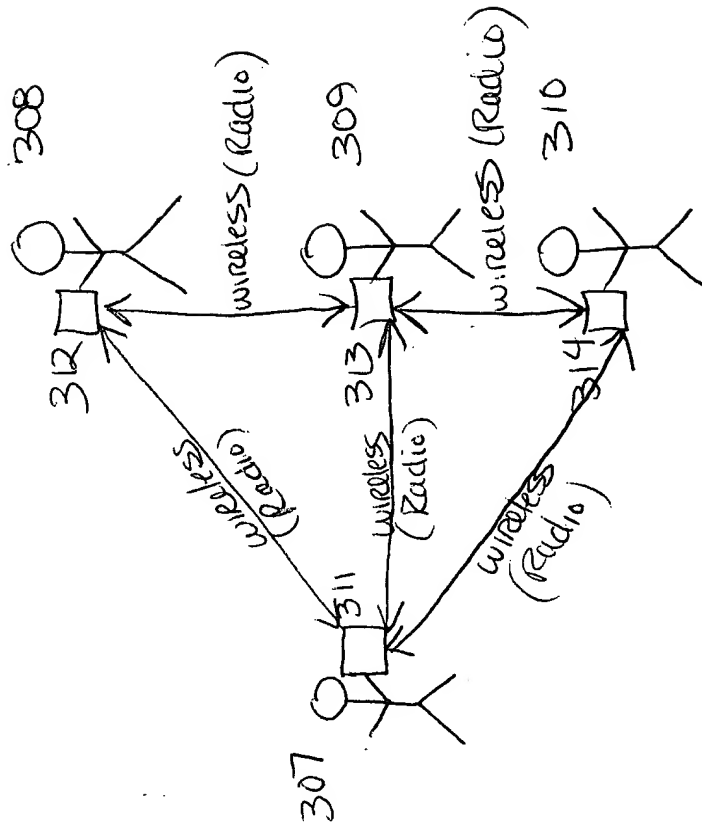
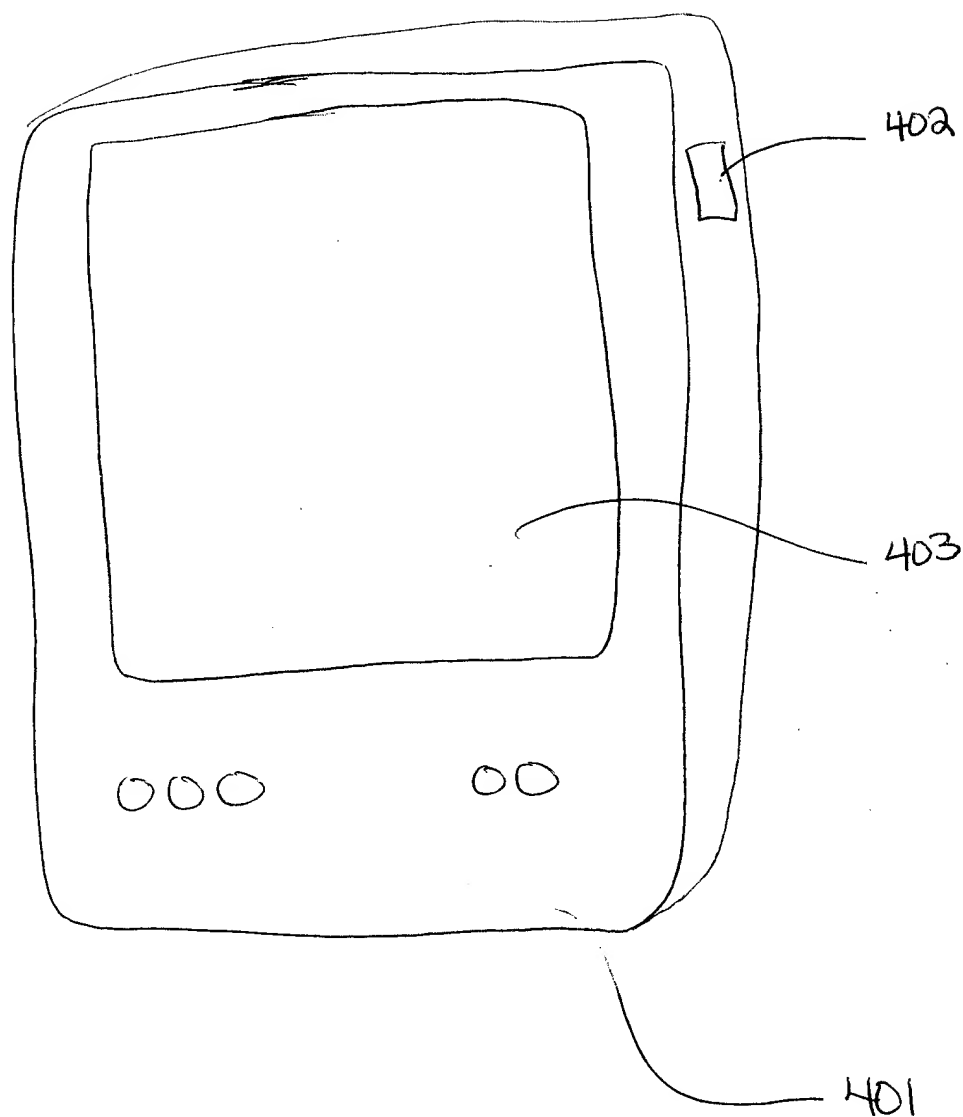


FIG. 3B



Fig. 4



TECHNOLOGICAL

FIG. 5

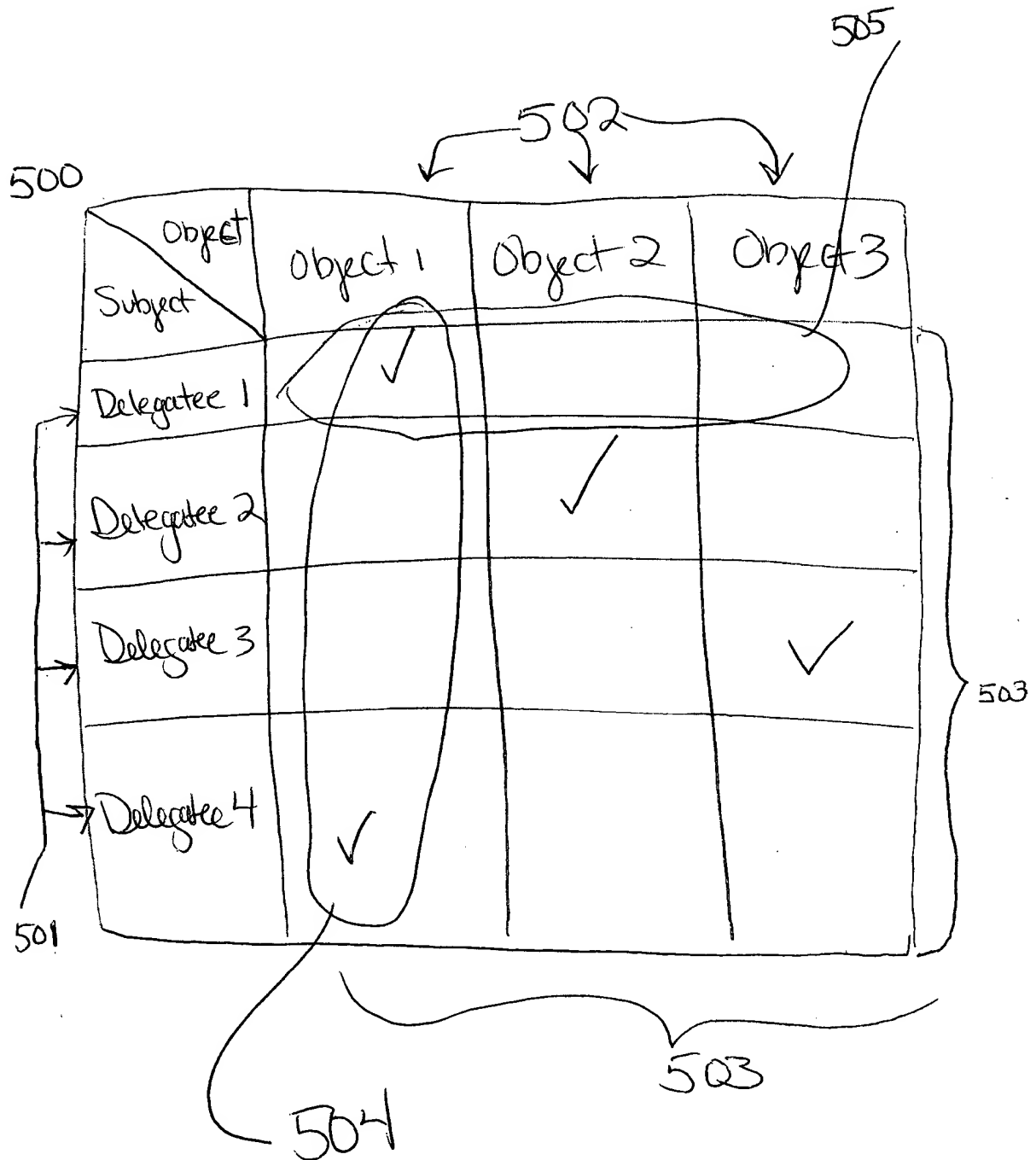
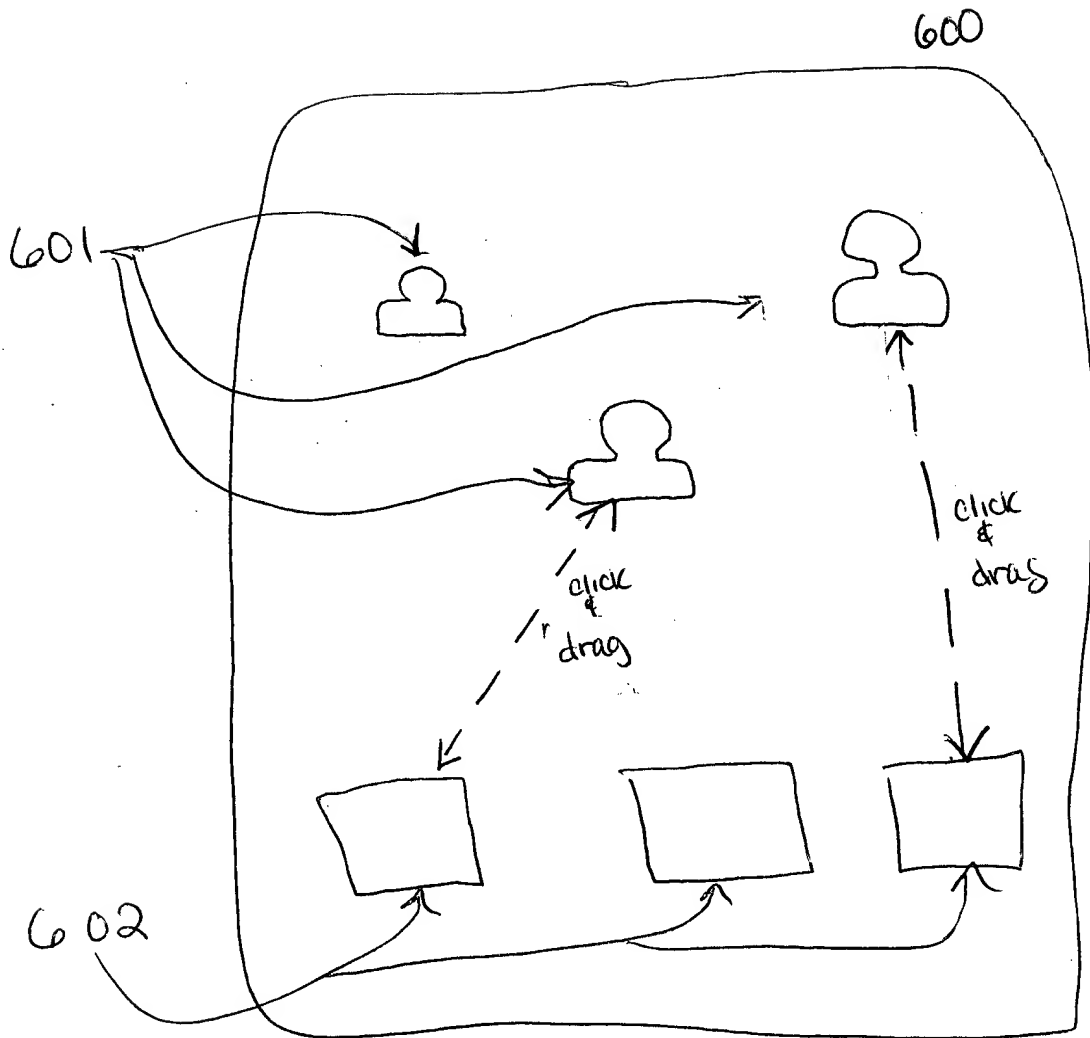


Fig. 4

FIG. 4



Sending Permission as part of a header within an HTTP request.  
(see <http://www.ietf.org/rfc/rfc2616.txt>).

GET /resource/ HTTP/1.1  
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg,  
application/vnd.ms-powerpoint, application/vnd.ms-excel,  
application/msword, \*/\*  
Accept-Language: en-us  
Accept-Encoding: gzip, deflate  
User-Agent: Mozilla/4.0 (compatible; MSIE 5.01; Windows NT 5.0)  
Vchain: 50U+F61olMMJzRmZs6QNRhx1UE3artX4ax56AJdJxYR7dzyPNglg+cwEOzzjT+  
v8ywbpyuugQvjluZSSVDFkbje/C+NV8sLfp5d3eaTykzeP+siJxl7wg3njzn2mLOnRKrXw  
WuX6gW3gR76zVuIz0ylwS9bZzSiu+ImN/SaHRS3eqBFPL7Ye0lJzin4jH8l046kLpiXB+O  
CloFRqsCmy5/JCrgvR0lRw2rolg6uXgK8xKdybfSXPkXx4w1A0d9GdGAqRycOGFoXtyzps  
+bASvdt2UJMssCXAKTw5bi+sUzuTbeX2xPJwDsPvuevICZHVgwnqJemvVUrH1DdhnMzYzF  
ZftTqeZ6sYAZCvsAiCYghRB6fK9JJV/vj9CzFlvfyFPfYYH75ONHjMdDr5qrVbSm4hk2GFZ  
IVPnyxYHwTafKHhbU2aQ5KFZbBGMwIikfBRMVfsqz3hpKa5Pd+NZELIwQ4FWlWgrIzL+jw  
Le1CfDk2V4SntsK+CFxBVGBU6dWpQYe2x0Bjat5yjbgyfXdz/vXfNxjHoAiUYwt4ZNwK0+  
UG78+Elrtw2UoIUPuQoCpCXh9EMeaACc7gSKY2KfuY10FeCHZ00c16a4M82DUtE6JhrX6U  
fR08r9QmxVnZu0/MW2vbWNS6rCUvsw78zWpChy3V1lBxTyofETq9WofZ3u+bomL8WgchTd  
/QPyHmaky37tXEhrjZxUkgJtI0oA12kVaTDERIwBnhQYM3mzp48n8wCq8qH2JP78DSOQwC  
HMolJQPMjfaOxaCR5wE9mhJGHjtTOpXx3GkLN1NuZYq7tbxYznGNJ2VgwUPpCQppohcWmF  
B1779OcTc59zt9kV6A3MyeI/lZCP5iW+VjPEa6h5CWhqHDT3mvDXSAJ8Wx66XiIEJmtzil  
1Dpnt0phJpCDAPyM2XO2bJGrPnimSbUsaELQWdMmtUyczy5TDilpqjKMNUlyt1HdmN2jly  
2+hHplkzgxXKHi1I/JtC97X2GBbm7nlUnICG6sAbxq6lBHX5sNs1TzWChjYhtFlMuCezT  
UmflLBgGPgh6Uv3oyUVOasRmsKi6qbqweDdxXf2D3uFR/iJNLUzwnt3/PJwTPJPJHJ+Sia  
/hkB9+alMZXFskMQaBpAE7/BfzRHs+09fDTL+kBFdO0w0fvkTo9AlfVF99wiAJ0hZt7q+e  
GWkPi5SRO+9/T710r7wNvC9NELRfsziq/v+8LM179yjjCm0chAZTv09iA8i28gQotzjdFX  
1fE3vL0wmrP/6lGSfqZhWc2Ho/m7FmqA9pJQVCRsVXXQOSWAZdPC3a75Jxyoa8hHDxgluK  
RaAF1xQboHeRlZ9GQHoia9ucQORhrbIu0S2Oafj99QjmszP3gQ64Pw+EakfS+lYQYbauY9  
Z+8bRf+G8JnhRZlvcyu5ylRW74goguqs6BSf6NcuC3rBJhf30xn15l/a8SraFtzUR4rv+e  
qjQyE=  
Connection: Keep-Alive  
Host: [www.websitexyz.com](http://www.websitexyz.com)  
HTTP/1.0 200 OK  
Content-Length: 16485  
Content-Type: text/html  
<html><head><title>WebsiteXYZ</title>  
...

FIG. 7.

Sending the permission as part of a "cookie" within an HTTP request  
(see <http://www.ietf.org/rfc/rfc2616.txt> and <http://www.ietf.org/rfc/rfc2109.txt>).

GET /resource/ HTTP/1.1  
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg,  
application/vnd.ms-powerpoint, application/vnd.ms-excel,  
application/msword, \*/\*  
Accept-Language: en-us  
Accept-Encoding: gzip, deflate  
User-Agent: Mozilla/4.0 (compatible; MSIE 5.01; Windows NT 5.0)  
Cookie: Vchain=50U+F61olMMJzRmZs6QNRhx1UE3artX4ax56AJdJxYR7dzyPNglg+cw  
EOzzjT+v8ywbpyuugQvjluZSSVDFkbje/C+NV8sLfp5d3eaTykzeP+siJxl7wg3njzn2mL  
OnRKRxWwUX6gW3gR76zVuIz0ylwS9bZzSiu+ImN/SaHRS3eqBFPL7Ye0lJzin4jH81046k  
LpiXB+OCloFRqsCmy5/JCrgvR0lRw2rolg6uXgK8xKdybfSXPkXj4w1A0d9GdGAqRycOGF  
oXtyzpS+bASvdt2UJMssCXAKTw5bi+sUzuTbeX2xPJwDsPvuevICZHVgwnqJemvVUrH1DD  
hnMzYzFzftQeZ6sYAZCvsAiCYghRB6fK9JJV/vj9CzF1vfyFPfYYH75ONHjMdDr5qrVbSm  
4hK2GFZIVPnyxYHwTafKHhbU2aQ5KFZbBGMwIikfBRMVfsqz3hpKa5Pd+NZELIwQ4FWlWg  
rIzL+jwLe1CfDk2V4SntsK+CFxBVGbU6dWpQYe2x0Bjat5yjbgyfXdz/vXfNxjHoAiUYwt  
4ZNwK0+UG78+Elrtw2UoIUPuQoCpCXh9EMeaAcc7gSKY2KfuY10FeCHZ00cl6a4M82DutE  
6JhrX6UfR08r9QmxVnZu0/MW2vbWNS6rCUvsw78zWpChy3V1lBxTyofETq9WofZ3u+bomL  
8WgchTd/QPyHMaky37tXEhrjZxUkgJtI0oA12kVaTDERIwBnhQYM3mzp48n8wCq8qH2JP7  
8DSOQwCHMolJQPMjfaOxaCR5wE9mhJGHjtTOpXx3GkLN1NuZYq7tbxYznGNJ2VgwUPpCQp  
pohcWmFB17790cTc59zt9kV6A3MyeI/lZCP5iW+VjPEa6h5CWhqHDT3mvDXSAJ8Wx66XiI  
EJmtzillDpnt0phJpCDAPyM2X02bJGrPnimSbUsaELQWdMmtUyczy5TDIlpqjKMNUlyt1H  
dmN2jly2+hHplkzgxXKhilI/JtC97X2GBbm7nlUnICG6sAbxq6lBHX5sNs1TzWChjYhtF  
lMuCezTUmflLBGPGh6Uv3oyUVoasRmsKi6qbqweDdxXfZD3uFR/iJNLUzwnt3/PJwTPJp  
JHJ+SIa/hkB9+alMZxfSkMQaBpAE7/BfzRHs+09fDTL+kBFdO0w0fvkTo9AlfVF99wiAJ0  
hZt7q+eGwKPi5SRO+9/T710r7wNvC9NELRfsziq/v+8LM179yjjCm0chAZTv09iA8i28gQ  
otzjdFX1fE3vL0wmrP/6lGSfqZhWc2Ho/m7FmqA9pJQVCRsVXXQOSWAZdPC3a75Jxyoa8h  
HDxgluKRaf1xQboHeRlZ9GQHoia9ucQORhrbIu0S2Oafj99QjmszP3gQ64Pw+EakfS+lY  
QYbauY9Z+8bRf+G8JnhRZIVcyu5y1RW74goguqs6BSf6NcuC3rBJhf30xn151/a8SraFtz  
UR4rv+eqjQyE=  
Connection: Keep-Alive  
Host: [www.websitexyz.com](http://www.websitexyz.com)  
HTTP/1.0 200 OK  
Content-Length: 16485  
Content-Type: text/html  
<html><head><title>WebsiteXYZ</title>  
...

FIG. 8

Sending the permissions as part of a URL

[Fig. 9](http://www.websitexyz.com/resource/?Vchain=50U+F61olMMJzRmZs6QNRhx1UE3artX4ax56AJdJxYR7dzyPNglg+cwEOzzjT+v8ywbpyuugQvj1uZSSVDfkbje/C+NV8sLfp5d3eaTykzeP+siJxl7wg3njzn2mLOnRKrXwWuX6gW3gR76zVuIz0y1wS9bZzSiu+ImN/SaHRS3eqBFPL7Ye01Jzin4jH8l046kLpiXB+OCloFRqsCmy5/JCrgvR0lRw2rolg6uXgK8xKdybfSXPkJx4wlA0d9GdGAqRycOGFoXtyzps+bASvdt2UJMssCXAKTw5bi+sUzuTbeX2xPJwDsPv uevICZHVgwnqJemvVUrH1DDhnMzYzFZftqeZ6sYAZCvsAiCYghRB6fK9JJV/vj9CzF1vfyFPfYYH75ONHjMdr5qrVbSm4hK2GFZIVPnyxYHwTafKHhbU2aQ5KFZbBGMwIikfBRMVfsqz3hpKa5Pd+NZELIwQ4FWlWgrIzL+jwLe1CfDk2V4SntsK+CFxBVGbU6dWpQYe2x0Bjat5yjbgyfXdz/vXfNxjHoAiUYwt4ZNwK0+UG78+Elrtw2UoIUPuQoCpCXh9EMeaACc7gSKY2KfuY10FeCHZ00c16a4M82DutE6JhrX6Ufr08r9QmxVnZu0/MW2vbWNS6rCUvsw78zWpChy3V11bxTyofETq9WofZ3u+bomL8WgchTd/QPyHMaky37tXEhrjZxUkgJtI0oA12kVaTDERIwBnhQYM3mzp48n8wCq8qH2JP78DSOQwCHMolJQPmjfaOxaCR5wE9mhJGHjtTOpXx3GkLN1NuZYq7tbxYznGNJ2VgwUPpCQppohcWmFB1779OcTc59zt9kV6A3MyeI/lZCP5iW+VjPEa6h5CWhqHDT3mvDXSAJ8Wx66XiIEJmtzil1Dpnt0phJpCDAPyM2X02bJGrPnimSbUsaELQWdMmtUyczy5TDI1pgjKMNUlytlHdmN2jly2+hHplkzgxXKhlI/JtC97X2GBbm7nlUnICG6sAbxq61BHX5sNslTzWChjYhtFlMuCezTUmf1LBgGPgh6Uv3oyUVoasRmsKi6qbqweDdxXfZD3uFR/iJNLUzwnt3/PJwtpJPJHJ+SIa/hkB9+alMZXFskMQaBpAE7/BfzRHs+09fDTL+kBfd00w0fvkTo9A1fVF99wiAJ0hZt7q+eGWkPi5SRO+9/T710r7wNvC9NELRfsziq/v+8LM179yjjCm0chAZTv09iA8i28gQotzjdFX1fE3vL0wmrP/6lGSfqZhWc2Ho/m7FmqA9pJQVCRsVXXQOSWAZdPC3a75Jxyoa8hHDxgluKRafLxQboHeRlZ9GQHoia9ucQORhrbIu0S2Oafj99QjmszP3gQ64Pw+EakfS+lyQYbauY9Z+8bRf+G8JnhRZIVcyu5y1RW74goguqs6BSf6NcuC3rBJhf30xn15l/a8SraFtzUR4rv+eqjQyE=</a></p></div><div data-bbox=)

Fig. 10

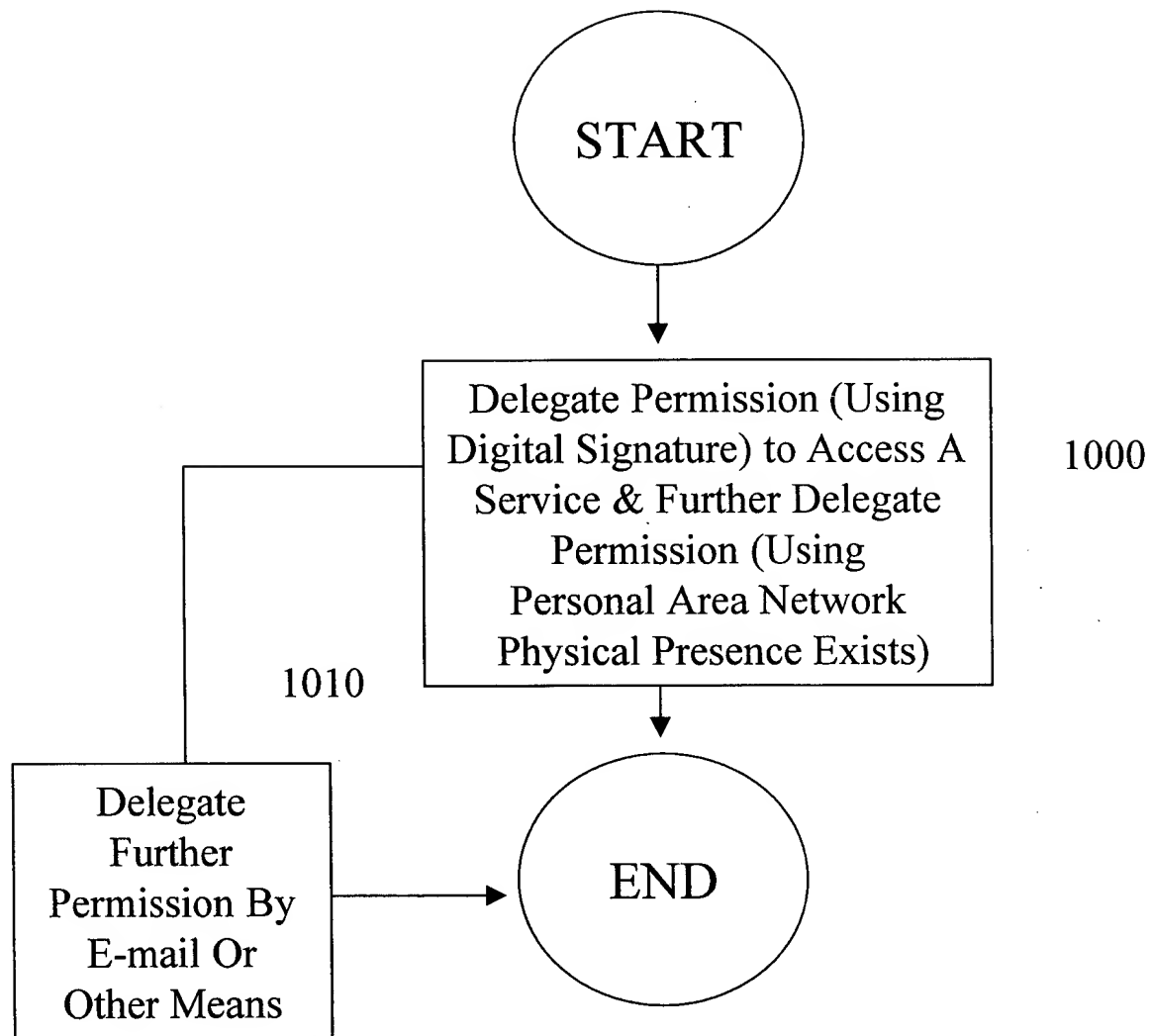


Fig. 11

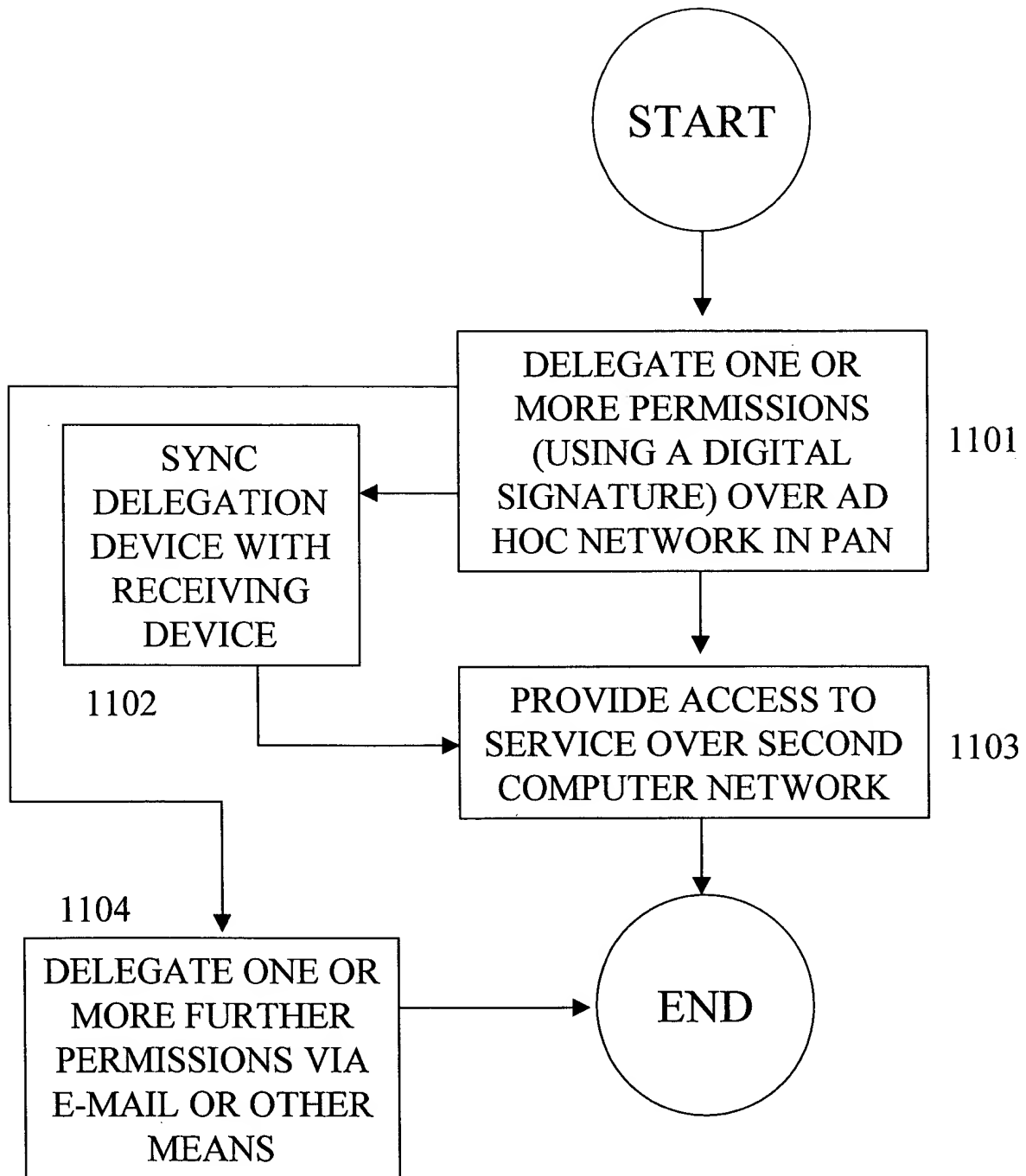




Fig. 12

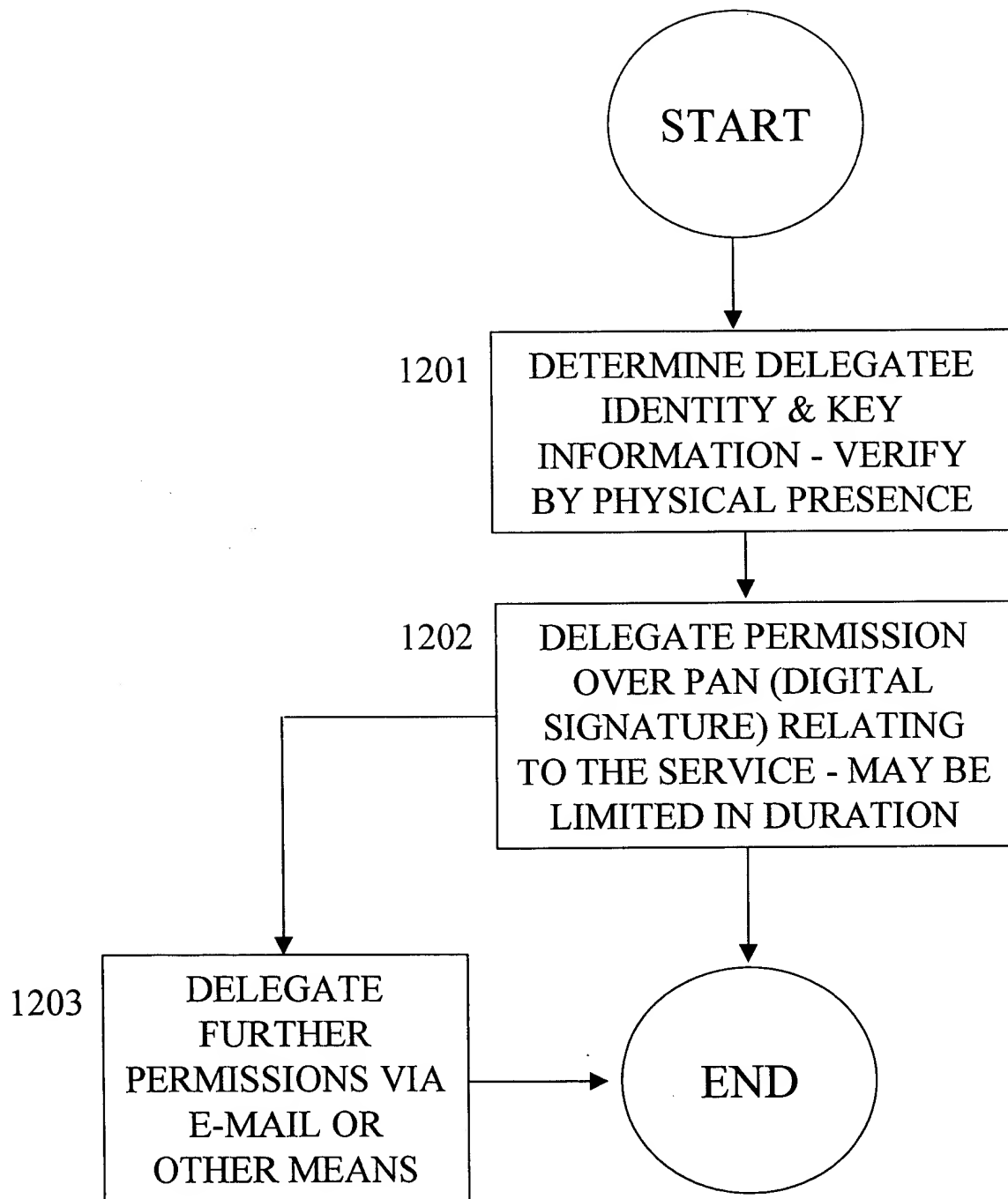


Fig. 13

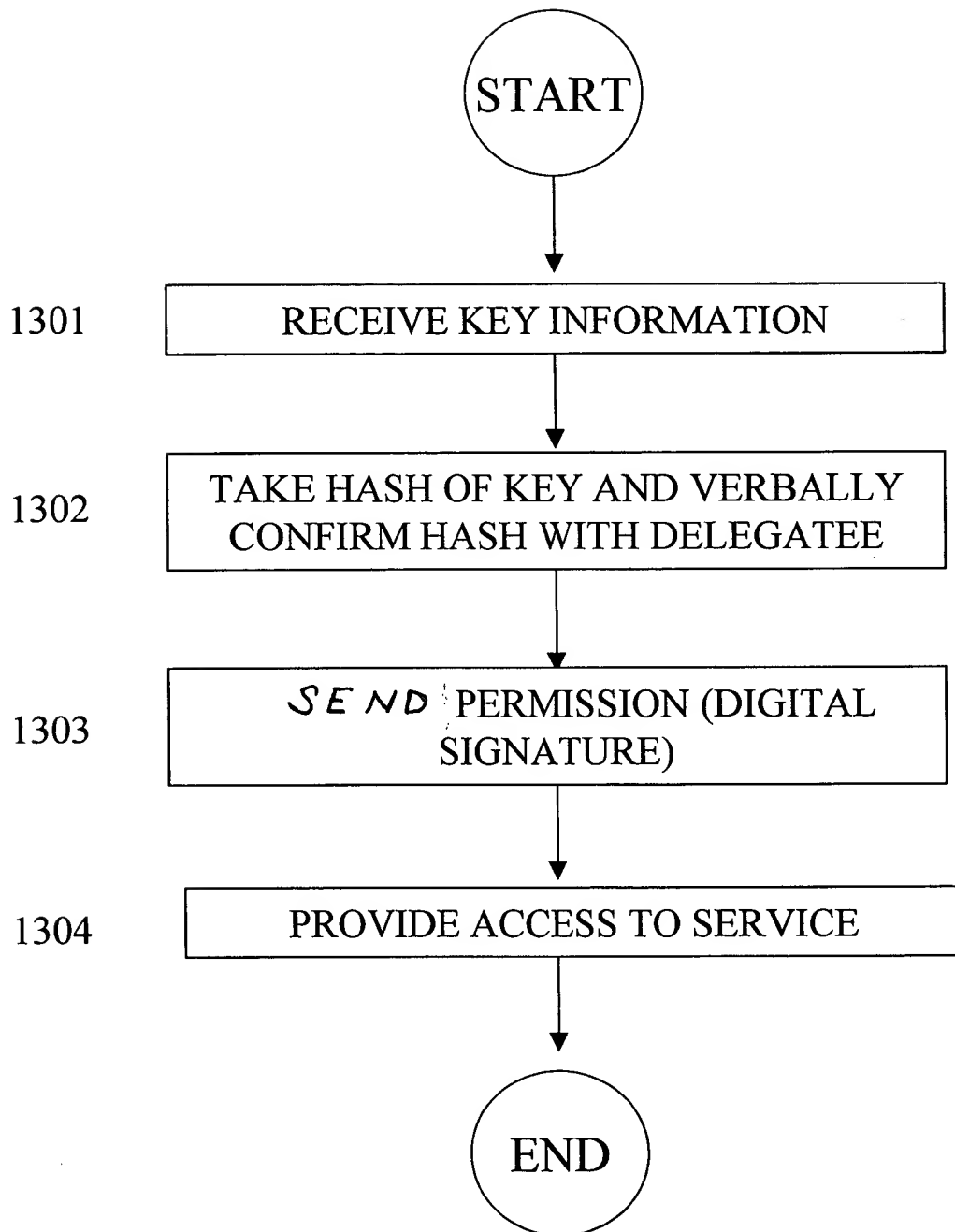


FIG. 13

Fig. 14

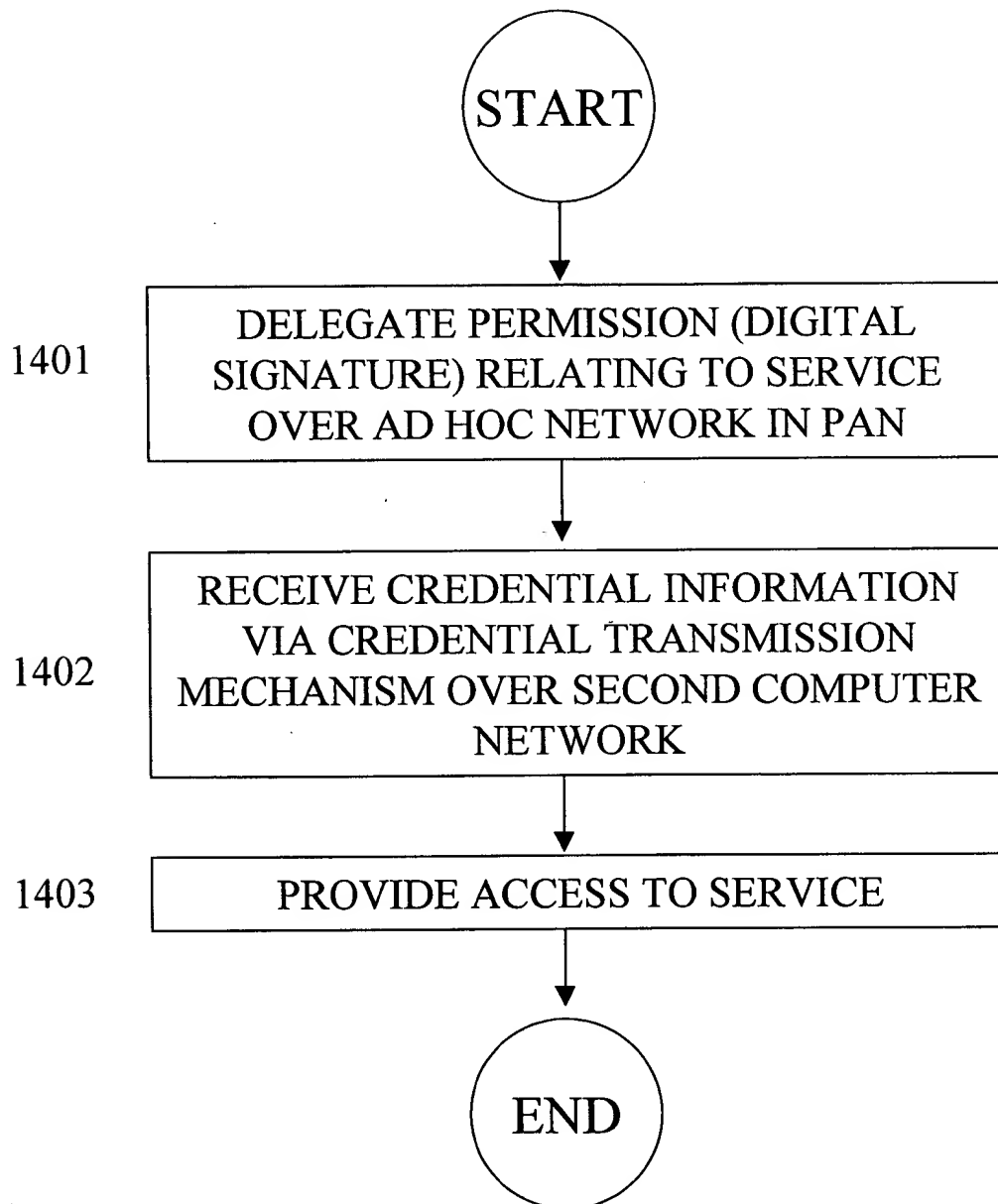


Fig. 15

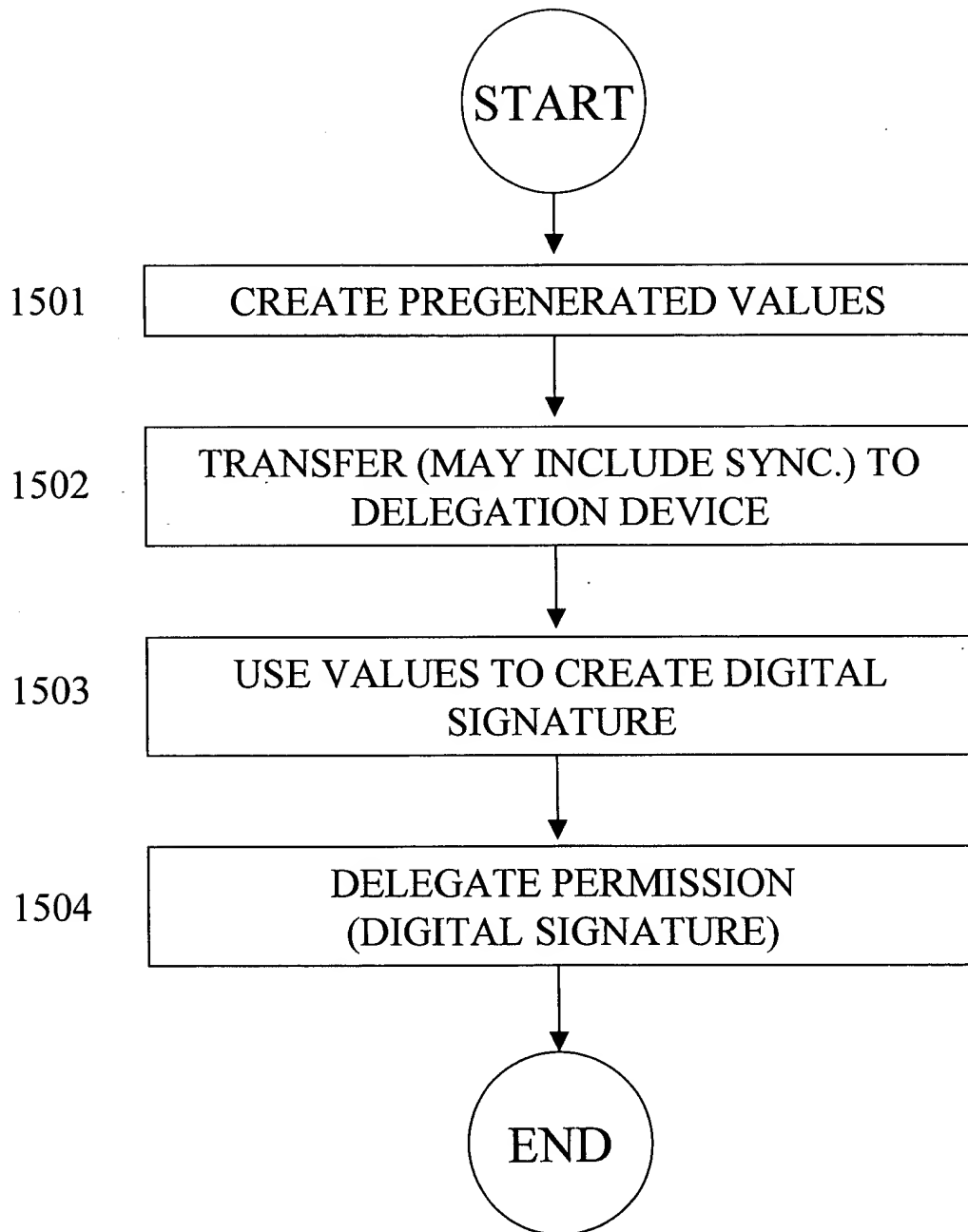


Fig. 16

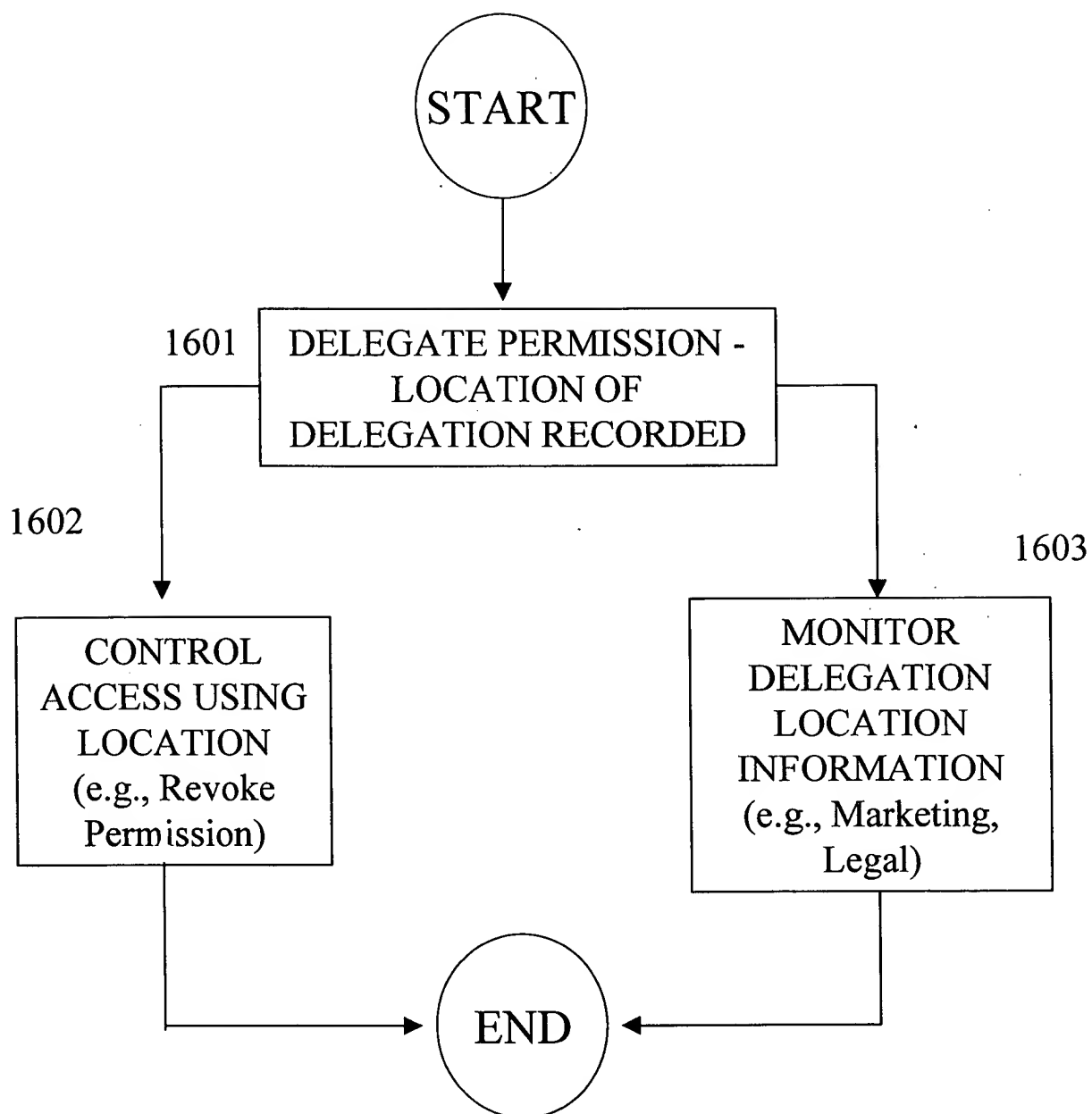


Fig. 17

